

REMARKS

The Office Action dated April 14, 2009 has been received and carefully noted. The above amendments and the following remarks are being submitted as a full and complete response thereto.

Claims 3-8 have been rejected. Claims 4, 5 and 8 have been amended, and claims 1-3 and 7 have been canceled. Thus, claims 4-6 and 8 are pending in this application. Support for the amendments to claim 8 may be found in the Specification as originally filed at pages 8-13 and in Fig. 1. Specifically, support for the amendments to claim 8 may be found at least at p. 8, second paragraph, p. 10, lower paragraph, to p. 11, upper paragraph; p. 10, middle paragraph; p. 12, middle to lower paragraph; p. 13, second paragraph; and p. 10, fifth paragraph. Applicants submit that no new matter is added. Applicants respectfully request reconsideration and withdrawal of all rejections.

Interview Summary

Applicants thank the Examiner for the courtesies extended during the telephone interview with the Applicants' representative on August 11, 2009. During the interview, proposed amendments to claims 5 and 8 were discussed. Applicants' representative argued that the combination of cited references Fairlie, Sircar, and Ogino fails to teach or suggest a second supply line and a second purifying means as taught and claimed by the present application.

Further to that discussion, Applicants respectfully submit the above amendments and following remarks.

Rejections Under 35 U.S.C. §103

Claims 5-8 are rejected under 35 U.S.C. §103(a) as being unpatentable over Fairlie et al. (WO 00/69773, hereinafter “Fairlie”) in view of Sircar et al. (U.S. Patent No. 6,103,143, hereinafter “Sircar”). Claims 3 and 4 are rejected under 35 U.S.C. §103(a) as being unpatentable over Fairlie as applied to claim 8 above, and further in view of Ogino (JP 10-139401, hereinafter “Ogino”). Applicants traverse these rejections.

Independent claim 8, as amended, recites a hydrogen supply unit comprising “a first purifying means having a hydrogen separation membrane connected to the reforming means for purifying hydrogen gas reformed by the reforming means;...a first supply line connecting the first purifying means to the first storage means and supplying the hydrogen gas purified by the first purified means to the first storage means without being pressurized; a second supply line branched from the first supply line between the first purifying means and the first storage means, supplying the hydrogen gas from the first purifying means to a second purifying means; said second purifying means having a pressure swing absorption separator and being connected to the second supply line for further purifying hydrogen gas purified by the first purifying means (emphasis added). Applicants submit that the amendments to claim 8 clarify that the second supply line is not coupled to the reformer in the same manner as the first supply line and that the second purifying means is not coupled to the reformer in the same manner as the first purifying means, as shown in Figure 1.

The Office Action admits that Fairlie does not explicitly disclose a second purifying means located in a second supply line but takes the position that adding a second purifying means and a second supply line amounts to a “mere duplication of parts.” Applicants submit that if the configuration of the second supply line and the

second purifying means was a mere duplication of parts, then these components would be coupled to the reformer in the same manner as the first supply line and the first purifying means and the second supply line would not be branched from the first supply line between the first purifying means and the first storage means. Applicants submit that the Office Action has not considered that the claimed second purifying means and the second supply line have a different configuration with respect to the other components in the hydrogen supply unit from the first purifying means and the first supply line, which is not obvious in light of the cited references. Moreover, the Office Action has not provided a valid reason for why adding a second purifying means and a second supply line in a different configuration from the first purifying means and the first supply line is a mere duplication of parts. As such, Applicants respectfully submit that the configuration of the second supply line and the second purifying means in the claimed hydrogen supply unit could not be considered a mere duplication of parts that is obvious in light of the cited references.

In addition, Applicants note that amended claim 8 recites a first purifying means having a hydrogen separation membrane, a first storage means having a hydrogen absorbing alloy, and a second purifying means having a pressure swing absorption separator. Applicants submit that each of these three components have different mechanisms for improving hydrogen purity within a hydrogen supply unit. Further, these devices are coupled such that the branch point of the hydrogen to the second purifying means is provided between the first purifying means and the first storage means. For the hydrogen provided to a stationary electric supply, the hydrogen purity is increased (at least) twice without being pressurized between the first purifying means and the first storage means. For the hydrogen provided to a mobile electric power

supply, the hydrogen purity is also increased (at least) twice with the hydrogen being pressurized between the first purifying means and the second purifying means. By having these components for improving hydrogen purity by different mechanisms within a hydrogen supply unit and by mutually connecting the devices as recited in claim 8, energy consumption is reduced and hydrogen can be supplied in a short amount of time (see Specification page 8, second paragraph).

For at least the above reasons, Applicants respectfully submit that independent claim 8 and claims 4-6, which depend therefrom, are not obvious over the proposed combination of Fairlie and Sircar and claim 4 is not obvious over the proposed combination of Fairlie and Ogino. Claims 3 and 7 have been canceled, rendering their rejection moot. Thus, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 3-8 under 35 U.S.C. §103(a).

In view of the above amendments, Applicants believe that the pending application is in condition for allowance. In the event that any fees are due with respect to this paper, please charge Deposit Account No. 01-2300, referencing Atty. Docket No. 101175.00035.

Respectfully submitted,

By 
Sushupta T. Sudarshan
Registration No.: 60,021

Customer No. 04372
Arent Fox LLP
1050 Connecticut Avenue, N.W.
Suite 400
Washington, D.C. 20036-5339
Tel 202.857.6000
Fax 202.857.6395
dcipdocket@arentfox.com